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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,576	02/19/2004	Isao Fuwa	P24950.DC1.doc	2501
7055	7590	01/25/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			MAI, NGOCLAN THI	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 01/25/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/780,576	FUWA ET AL.	
	Examiner	Art Unit	
	Ngoclan T. Mai	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 16-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23-32 is/are allowed.
- 6) ☒ Claim(s) 16, 18-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 17 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/31/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

2. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Rutz et al. (U.S. Patent No. 5,484,469, now Rutz).

Rutz discloses a metal powder composition comprising:

an iron-based powder material,

a nickel powder material,

a copper powder material, and

a graphite powder material (col. 7, lines 26-32);

wherein the iron-based powder material is an Ancorsteel® 85 HP powder which contains 0.85 wt% Mo and less than 0.4 wt% of other material including Cr, see col. 3, lines 16-21. The iron-based powder disclosed by Rutz reads on the claimed chrome molybdenum steel powder material. With respect to the intended "use in selective laser sintering", the claimed intended use of the claimed alloy does not lend patentability to the alloy. A mere statement of a new use for an otherwise old or obvious composition cannot render a claim to the composition patentable. See In re Lemin, 51 CCPA 942, 326 F.2d 437, 140 USPQ 273 (1964), In re Thuau 135 F.2d 344, 57 USPQ 324 (CCPA 1943), Ex parte Douros 163 USPQ 667 (POBA), and In re Craige, 188 F.2d 505, 89 USPQ 393 (CCPA 1951).

Claim Rejections - 35 USC § 103

3. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz.

Rutz teaches the metal powder substantially as claimed. The difference between Rutz and the claim is that Rutz does not teach the iron-based powder material having an average particle diameter less

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than that of nickel powder and that of copper powder. While Rutz is silent about the particle size of nickel, however since nickel like copper is an alloying element for iron-based powder, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ nickel powder that has the same particle size as copper powder. Furthermore, since Rutz teaches employing iron-based powder having a weight average particle size in the range of 10-500 microns, col. 3, lines 55-57 and copper powder of -100 mesh (149 microns). Based on this teaching it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any portion of range of the size of iron-based powder, including the claimed range, from the broader range disclosed by Rutz because Rutz finds that the average particle diameter of the iron-based powder in the entire disclosed range can be used to form sintered product. To select iron-based powder having average particle size less than that of nickel or copper powder material therefore would have been obvious. --- Note: Even if a reference teaches a preferred range within a broader range, it still does not "teach away" from the claimed invention. See MPEP 2123.

As for the average particle diameter of the iron-based powder material is less than about three quarter of that of nickel powder material and copper powder material as recited in claim 19, although Rutz teaches the iron based powder having average particle size in the range of 10-500 microns, the difference in particle size will not support the patentability of the subject matter encompassed by the prior art unless there is evidence indicating such particle size is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation." See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); *In re Hoeschele*, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969); *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d (Fed.cir), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). Furthermore, the specification contains no disclosure of either the critical nature of the claimed particle size range or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in the claim, the applicant must show that

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the chosen dimensions are critical. *In re Woodruff*, 919 F.2d, 1575, 1578, 16 USPQ2d, 1936 (Fed. Cir. 1990).

4. Claims 20 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Rutz et al. in view of Luk et al. (U.S. Patent No. 5,429,792).

Rutz discloses the claimed metal powder composition for warm powder compaction. The differences between Rutz and the claims are that Rutz does not teach the powder composition comprises granulated powder or forming the composition by mixing and crushing the resultant mixture.

Luk teaches a metal powder composition for warm compacting wherein starting materials having disparity in particle size can be blended together to prevent segregation and dusting of fine powder particle during transportation, storage and use, col. 1, lines 40-52. Luk teaches that fine powder can be glued to coarser particles to prevent starting materials from segregation and dusting, col. 1, lines 61-64. In col. 9, lines 31-37, Luk teaches the starting materials are blended in solvent until the powder composition reached a substantially homogeneous state and then after drying the blended powder is coaxed through a 40 mesh screen to break up any large agglomerates. Note that the coaxing of the powder mixture through the 40-mesh screen reads on the step of crushing and that agglomerate is equivalent to granulates.

Since there is a difference in particle size of the Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to granulate the metal powder composition disclosed by Rutz by the method taught by Luk to form metal powder composition that is homogeneously mixed together to prevent the powder loss due to segregation and dusting.

5. Claims 17 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


6. Claims 23-32 are allowable.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ngoclan T. Mai
Primary Examiner
Art Unit 1742

n.m.